

IN THE CLAIMS:

Claim 1 has been amended as follows:

1. (Currently amended) An X-ray apparatus comprising:
an x-ray imaging system comprising a carrier support with an x-ray source and a radiation detector mounted thereon at respective positions allowing an examination subject to be disposed between the x-ray source and the radiation detector;
a supporting arrangement for said carrier support ~~for moving~~ that moves said carrier support relative to the examination subject ~~for acquiring a series of 2D projections of the examination subject with the x-ray source and the radiation detector;~~
an optical 3D sensor comprising a light source, mounted on said carrier support, that emits a light beam line that is detectable on a surface of the subject and an optical detector, mounted on said carrier support, that detects said light beam line on the surface of the subject and that emits a detector output dependent thereon, that performs a distance measurement selected from the group consisting of active triangulation, active focus search, propagation measurement, and interferometry; and
said supporting arrangement for said carrier support ~~also moving~~ said carrier support, and thus said light line, relative to said examination subject to acquire a series of 2D projections of the examination subject with the x-ray source and the radiation detector and to acquire a 3D image dataset, representing height above a 2D plane, from said distance

measurement and said detector output of said optical detector of said optical 3D sensor₁ conforming to least a portion of a surface of the examination subject.

2. (Original) An X-ray apparatus as claimed in claim 1, wherein said carrier support is a C-arm.

Claim 3 has been amended as follows:

3. (Currently Amended) An X-ray apparatus as claimed in claim 2, wherein said C-arm has a circumference, and wherein said supporting arrangement moves said C-arm along said circumference during acquisition of said ~~3D~~ 3D image dataset ~~series of 2D projections~~.

4. (Previously Presented) An X-ray apparatus as claimed in claim 2, wherein said supporting arrangement moves said C-arm through an angulation movement for acquiring said 3D image dataset.

5. (Original) An X-ray apparatus as claimed in claim 2 wherein said C-arm and said supporting arrangement form an isocentric apparatus.

6. (Previously Presented) An X-ray apparatus as claimed in claim 1 comprising a computer supplied with said series of 2D projections for calculating a volume dataset of the body of the examination subject, and for combining said 3D image dataset with said volume dataset by a combination procedure selected from the group consisting of fusing and superimposing.

Claim 7 has been amended as follows:

7. (Currently Amended) A method comprising the steps of:

disposing an examination subject in an x-ray imaging system comprising a carrier support with an x-ray source and a radiation detector mounted

thereon at respective positions allowing the examination subject to be disposed between the x-ray source and the radiation detector;
moving said carrier support relative to the examination subject for acquiring a series of 2D projections of the examination subject with the x-ray source and the radiation detector; and
performing a distance measurement, selected from the group consisting of active triangulation, active focus search, propagation measurement, and interferometry, with an optical 3D sensor comprising a light source and an optical detector both mounted to said carrier support by emitting a light line from said light source onto a surface of the examination subject and detecting the light line on the surface of the examination subject with said light detector and moving said light line relative to the examination subject with said carrier support while also moving said carrier support relative to said examination subject to acquire said series of 2D projections, so as to also acquire a 3D image dataset, representing height above a 2D plane, from said distance measurement and an output of said optical detector of said optical 3D sensor, conforming to least a portion of a surface of the examination subject.

8. (Original) A method as claimed in claim 7, comprising employing a C-arm as said carrier support.

9. (Previously Presented) A method as claimed in claim 8, wherein said C-arm has a circumference, and comprising moving said C-arm along said circumference during acquisition of said 3D image dataset.

10. (Previously Presented) A method as claimed in claim 8, comprising moving said C-arm through an angulation movement for acquiring said 3D image dataset.

11. (Original) A method as claimed in claim 8 wherein said C-arm and said supporting arrangement form an isocentric apparatus.

12. (Previously Presented) A method as claimed in claim 7 comprising supplying a computer with said series of 2D projections and, in said computer, calculating a volume dataset of the body of the examination subject, and combining said 3D image dataset with said volume dataset by a combination procedure selected from the group consisting of fusing and superimposing.